

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/518,051 08/22/95 RUSSELL S 74023

LM51/0402

EXAMINER

MENGISTU, A

ART UNIT	PAPER NUMBER
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2774

8

DATE MAILED: 04/02/98

Please find below and/or attached an Office communication concerning this application or proceeding.

**Commissioner of Patents and Trademarks**

## Office Action Summary

Application No.	08/518,051	Applicant(s)	STEPHEN D. RUSSELL et al.
Examiner	Amare Mengistu	Group Art Unit	2774

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

### Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

### Status

Responsive to communication(s) filed on \_\_\_\_\_.

This action is FINAL.

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

### Disposition of Claims

Claim(s) 1-11 is/are pending in the application.

Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-11 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119 (a)-(d)

Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

### Attachment(s)

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_  Interview Summary, PTO-413

Notice of References Cited, PTO-892  Notice of Informal Patent Application, PTO-152

Notice of Draftsperson's Patent Drawing Review, PTO-948  Other \_\_\_\_\_

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## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "*driver interface circuit*" of *figure 4, mailed on 9/19/97* and "*programmable gray-scale LCD 40*" filed on *1/22/98*. Correction is required.

### *Specification*

2. The amendment filed 1/22/98 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: page 2, lines 1-11. **Programmable gray-scale LCD 40** introduces a new matter into the disclosure.

Applicant is required to cancel the new matter in the reply to this Office action.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3,6,10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's Admitted Prior Art (figs. 1-3).

As to claims 1-3,6,10-11, Applicant's Admitted Prior Art a super twisted nematic liquid crystal display system (figs. 1-3, also see, page 8, the last 2 lines) comprising: a polarizer (16), a beam of incident light (22), a pixel sequence coupled (14) to the polarizer comprising multiple crystal display pixels (10) aligned collinearly along the beam of polarized light for varying the polarization angle, an analyzer coupled to the polarizer and the pixel sequence to pass a gray-scale portion of the beam of polarized light transmitted from the pixel sequence as a function of polarized angle (page, 8, lines 6-23), a transparent substrates (12) ; and a drive circuit (18).

*Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-5, 8 and 9, are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Johary et al (5,196,839).

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As to claims 4-5,8 and 9, Applicant's Admitted Prior Art discloses a liquid crystal display with a gray scale control, but has failed to explicitly teach the gray scale control includes a programmable driver. Johary is cited to teach that it is well known for a gray scale display circuit to have a programmable gray scale generators (drivers) to provide gray scale at the display (see, Abstract, col.2, lines 35-46).

Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to have incorporated programmable gray-scale drives of Johary into the system of Applicant's Admitted Prior Art, since this will allow the Admitted Prior Art device to have an advantage of automatically control the gray scale of a display in order to ensure simplicity and higher efficiency of adjustment operation without requiring operators.

As to claim 8, active matrix liquid crystal display is well known in a display art.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Kobayashi et al (5,680,185).

In regard to claim 7, Applicant's Admitted prior Art discloses a liquid crystal display having a substrates (page 2, lines 5-10), but failed the substrate being a sapphire substrates. However, Kobayashi et al clearly shows that the substrates could be made of sapphire substrates ( col.14, lines 39-46).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to have used Kobayashi's sapphire substrate into the device of Applicant's Admitted

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Prior Art device since this will greatly reduce the interface properties and enabling a high quality silicon layer.

*Response to Arguments*

8. Applicant's arguments filed on 1/22/98 have been fully considered but they are not persuasive.

Figs. 1-3 does not show that an array of pixels aligned collinearly along the beam of polarized light for varying the polarization angle. First, there is no support on page 9, lines 19-23 for the claimed limitation. Second, figs. 1-3 clearly shows that an array of pixels aligned collinearly along the beam of polazed light. Here the word collinearly is broadly defined by Webster's New World Dictionary as "in or sharing, the same straight lines as two points or plane".

Appliacnt also argues that Johary does not teach or sugest that the gray-scale control coupled to at least one pixel of the sequence of collineary aligned pixels. Since Johary's gray scale control is collinearly aligned to pixels, it would be obviously at least to aligned to one pixel.

*Conclusion*

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication should be directed to Amare Mengistu at telephone number (703) 305-4880.

11. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 308-9051, (for formal communications intended for entry)

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**Or:**

(703) 308-6606 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).



Amare Mengistu

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April 1, 1998